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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,586	01/15/2002	Kevin P. Baker	P3430R1C1	9888

7590 09/10/2004

Ginger R. Dreger
Suite 1150
201 California Street
San Francisco, CA 94111-3335

EXAMINER	
LANDSMAN, ROBERT S	

ART UNIT	PAPER NUMBER
1647	

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/052,586	BAKER ET AL.	
	Examiner	Art Unit	
	Robert Landsman	1647	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 25-37 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 25-37 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on 15 January 2002 is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 1/14/03.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☒ Other: Sequence comparisons A and B

DETAILED ACTION

1. Formal Matters

A. The Preliminary Amendment dated 6/4/02, has been entered into the record.

B. The Information Disclosure Statement dated 1/14/03 has been entered into the record.

C. Claims 25-37 are pending and are the subject of this Office Action.

2. Priority

The Examiner has concluded that the subject matter defined in this application is not supported by any of the applications in the chain of priority because the presently claimed subject matter is not supported by a specific, substantial or well-established utility, nor, for this reason, is it enabled. Accordingly, the subject matter defined in claims 25-37 has an effective filing date of 1/15/02, which is the filing date of the present application.

Should the applicant disagree with the examiner's factual determination above, it is incumbent upon the applicant to provide the serial number and specific page number(s) of any parent application filed prior to 1/15/02 which specifically supports the particular claim limitation for each and every claim limitation in all the pending claims which applicant considers to have been in possession of and fully enabled for prior to 1/15/02.

3. Information Disclosure Statement

A. References 3 and 4 on the IDS dated 1/14/03 have been lined through since they are not in proper format, including author and accession number.

4. Specification

A. Though none could be found, due to the length of the specification, Applicants are reminded that embedded hyperlink and/or other form of browser-executable code are not permitted in the specification. See MPEP § 608.01.

B. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The title recites polypeptides and polynucleotides whereas the claims are drawn to polypeptides.

5. Claim Objections

A. The syntax of claims 25-37 could be improved by replacing the phrase "shown in Figure 4 (SEQ ID NO:4)" with "of SEQ ID NO:4."

6. Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

A. Claims 25-37 are rejected under 35 U.S.C. 101 because the claimed invention is not supported by a specific, substantial and credible asserted utility or a well-established utility. These claims are directed to polypeptides having various sequence homology to SEQ ID NO:4. However, the invention encompassed by these claims has no apparent or disclosed patentable utility. This rejection is consistent with the current utility guidelines, published 1/5/01, 66 FR 1092. The instant application has provided a description of an isolated protein. However, the instant application does not disclose a specific and substantial biological role of this protein or its significance.

However, it is clear from the instant specification that the claimed protein is what is termed an "orphan receptor" in the art. The instant application does not disclose the biological role of the claimed protein or any associated disease state. The present claims are drawn to PRO284 proteins whereas the only potential utility is drawn to gene amplification data regarding the genomic DNA which, ultimately, encodes PRO284. The fact that gene amplification may be an essential mechanism for oncogene activation is, respectfully, not relevant to the present claims which, again, are drawn to proteins. The fact that genomic DNA was isolated from a variety of cancers does not provide a utility for the proteins encoded by the DNA since Applicants have not demonstrated that the increase in genomic DNA would ultimately lead to an increase in protein expression in these cancer cells, which would be required in this situation in order for the proteins of the present invention to have a utility.

Furthermore, since the protein of the invention is not supported by a specific and substantial asserted utility or a well established utility, the encoding polynucleotides and chimeric proteins also lack utility.

7. Claim Rejections - 35 USC § 112, first paragraph - enablement

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

A. Claims 25-37 are rejected under 35 U.S.C. 112, first paragraph, as failing to adequately teach how to use the instant invention. Specifically, since the claimed invention is not supported by a specific, substantial and credible asserted utility or a well established utility for the reasons set forth above, one skilled in the art clearly would not know how to use the claimed invention.

B. Furthermore, even if the claims possessed utility under 35 USC 101, claims 25-37 would still be rejected under 35 USC 112, first paragraph, because the specification, while then being enabling for SEQ ID NO:3 and 4, does not reasonably provide enablement for polypeptides having at least 80%, 85%, 90%, 95% or 99% sequence identity to SEQ ID NO:4, to the protein encoded by ATCC No. 209787, for the extracellular domain thereof, or for fusion proteins. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims. There is no functional limitation in the claims. The claims encompass an unreasonable number of inoperative polypeptides, or polynucleotides which encode these polypeptides, which the skilled artisan would not know how to use.

There are no working examples of polynucleotides or polypeptides less than 100% identical to SEQ ID NO:3 or 4, or the mature form thereof (i.e. lacking its signal peptide). The skilled artisan would not know how to use non-identical polypeptides on the basis of teachings in the prior art or specification unless they possessed a specific function disclosed in the instant specification, in which there is none. While the specification generally describes homologous proteins, Applicants still have not taught to which family of proteins the protein of the present invention belongs. The specification does not provide guidance for using polynucleotides encoding polypeptides related to (*i.e.,* 80%-99% identity) but not identical to SEQ ID NO:3 or 4 which do not have any specific, known function. The claims are broad because they do not require the claimed polypeptide to be identical to the disclosed sequence and because the claims have no functional limitation.

For these reasons, which include the complexity and unpredictability of the nature of the invention and art in terms of the diversity of proteases and lack of knowledge about function(s) of encompassed polypeptides structurally related to SEQ ID NO:4, the lack of direction or guidance for using polypeptides that are not identical to SEQ ID NO:4, and the breadth of the claims for structure without function, it would require undue experimentation to use the invention commensurate in scope with the claims.

8. Claim Rejections - 35 USC § 112, first paragraph – written description

A. Claims 25-37 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claims are drawn to polypeptides having at least 80%, 85%, 90%, 95% or 99% sequence identity with SEQ ID NO:4, and fusion proteins thereof. The claims do not require that the polypeptide of the present invention possess any particular biological activity, nor any particular conserved structure, or other disclosed distinguishing feature. Thus, the claims are drawn to a genus of polypeptides that is defined only by sequence identity.

To provide adequate written description and evidence of possession of a claimed genus, the specification must provide sufficient distinguishing identifying characteristics of the genus. The factors to be considered include disclosure of compete or partial structure, physical and/or chemical properties, functional characteristics, structure/function correlation, methods of making the claimed product, or any combination thereof. In this case, the only factor present in the claim is a partial structure in the form of a recitation of percent identity. There is not even identification of any particular portion of the structure that must be conserved. Accordingly, in the absence of sufficient recitation of distinguishing identifying characteristics, the specification does not provide adequate written description of the claimed genus.

Vas-Cath Inc. v. Mahurkar, 19USPQ2d 1111, clearly states "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession *of the invention.* The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed.*" (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See *Vas-Cath* at page 1116). As discussed above, the skilled artisan cannot envision the detailed chemical structure of the encompassed genus of

polypeptides, and therefore conception is not achieved until reduction to practice has occurred, regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method of isolating it. The compound itself is required. See *Fiers v. Revel*, 25 USPQ2d 1601 at 1606 (CAFC 1993) and *Amgen Inc. v. Chugai Pharmaceutical Co. Ltd.*, 18 USPQ2d 1016.

One cannot describe what one has not conceived. See *Fiddes v. Baird*, 30 USPQ2d 1481 at 1483. In *Fiddes*, claims directed to mammalian FGF's were found to be unpatentable due to lack of written description for that broad class. The specification provided only the bovine sequence.

Therefore, only isolated polypeptides comprising the amino acid sequence set forth in SEQ ID NO:4, or encoded by SEQ ID NO:3 (or ATCC 209787), but not the full breadth of the claims, meets the written description provision of 35 U.S.C. §112, first paragraph. Applicant is reminded that *Vas-Cath* makes clear that the written description provision of 35 U.S.C. §112 is severable from its enablement provision (see page 1115).

9. Claim Rejections - 35 USC § 112, second paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 25-37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. Claims 25-37 are vague and indefinite since it is not clear whether or not the protein of the present invention is a soluble protein (e.g protease), nor is it disclosed as being expressed on a cell surface. Accordingly, the limitation that the claimed protein comprises an "extracellular domain" is indefinite, as the art does not recognize soluble proteins as having such domains. Further, if the protein had an extracellular domain, the recitation of "the extracellular domain"..."lacking its associated signal sequence" is indefinite as a signal sequence is not generally considered to be part of an extracellular domain, as signal sequences are cleaved from said domains in the process of secretion from the cell.

10. Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

A. Claims 25-29 are rejected under 35 U.S.C. 102(a) as being anticipated by Pluvinet et al. (Accession No. Q9NPR3). The claims recite a polypeptide 80-99% identical to SEQ ID NO:4 of the present invention. Pluvinet teach a protein 99.5% identical to SEQ ID NO:4 (Sequence Comparison A). Pluvinet also teach a polynucleotide 98% identical to SEQ ID NO:3 (i.e. ATCC 209787 – Sequence Comparison B).

11. Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

A. Claims 36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pluvinet et al. The claims recite a polypeptide at least 80% identical to SEQ ID NO:4 fused to an epitope tag. The teachings of Pluvinet are seen in the above rejection under 35 USC 102. Pluvinet does not teach the protein fused to an epitope tag. However, it would have been obvious to the artisan at the time of the present invention to have fused the protein of the present invention to an epitope tag in order to purify the protein. This technique could have been done recombinantly using the DNA encoding the protein.

12. Double Patenting

A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.

A. Claims 25-37 are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 25-37 of copending Application No. 10/232,232. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

13. Conclusion

A. No claim is allowable.

Advisory information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Landsman whose telephone number is (703) 306-3407. The examiner can normally be reached on Monday - Friday from 8:00 AM to 5:00 PM (Eastern time) and alternate Fridays from 8:00 AM to 5:00 PM (Eastern time).

If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Gary Kunz, can be reached on (703) 308-4623.

Official papers filed by fax should be directed to (703) 308-4242. Fax draft or informal communications with the examiner should be directed to (703) 308-0294.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

Robert Landsman, Ph.D.
Patent Examiner
Group 1600
September 02, 2004

ROBERT LANDSMAN
PATENT EXAMINER

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. GNE.3430R1C1	APPLICATION NO. US 10/052,586
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (USE SEVERAL SHEETS IF NECESSARY)	APPLICANT Baker et al.	
	FILING DATE January 15, 2002	GROUP 1645

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (IF APPROPRIATE)
M	1.	5,536,637	07/16/96	Jacobs			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	TRANSLATION NO

EXAMINER INITIAL		OTHER DOCUMENTS (INCLUDING AUTHOR, TITLE, DATE, PERTINENT PAGES, ETC.)
M	2.	Klein et al. Selection for Genes Encoding Secreted Proteins and Receptors. *Proc. Natl. Acad. Sci.*, 93:7108-7113 (1996)
	~~3.~~	~~Database Search, DNA Sequence Alignments [BLASTN 2.2.1 [Jul-12-2001], NCBI]~~
	4	~~Database Search, Protein Sequence Alignments [BLASTP 2.2.1 [Jul-12-2001], NCBI]~~

S:\DOCS\GNE\GNE-2112.DOC
010903

EXAMINER	DATE CONSIDERED 9.2.04

*EXAMINER: INITIAL IF CITATION CONSIDERED, WHETHER OR NOT CITATION IS IN CONFORMANCE WITH MPEP 609; DRAW LINE THROUGH CITATION IF NOT IN CONFORMANCE AND NOT CONSIDERED, INCLUDE COPY OF THIS FORM WITH NEXT COMMUNICATION TO APPLICANT.

Notice of References Cited	Application/Control No. 10/052,586	Applicant(s)/Patent Under Reexamination BAKER ET AL.	
	Examiner Robert Landsman	Art Unit 1647	Page 1 of 1

U.S. PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
	A	US-			
	B	US-			
	C	US-			
	D	US-			
	E	US-			
	F	US-			
	G	US-			
	H	US-			
	I	US-			
	J	US-			
	K	US-			
	L	US-			
	M	US-			

FOREIGN PATENT DOCUMENTS

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Country	Name	Classification
	N					
	O					
	P					
	Q					
	R					
	S					
	T					

NON-PATENT DOCUMENTS

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
	U	Pluvinet R., et al. Database SPTREMBL. Accession No. Q9NPR3, 2000.
	V	Pluvinet R., et al. Database GenEmbl. Accession No. AL390077, 19 July 2000.
	W	
	X	

*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)
Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.

Sequence Comparism A

```
ID/AC   Q9NPR3      PRELIMINARY;      PRT;   285 AA.
DT   01-OCT-2000 (TrEMBLrel. 15, Created)
DT   01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
DT   01-OCT-2003 (TrEMBLrel. 25, Last annotation update)
DE   C3orf1 hypothetical protein (Hypothetical protein) (Similar to M5-14
DE   protein).
GN   DKFZP564B172.
OS   Homo sapiens (Human).
OC   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
OC   Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
OX   NCBI_TaxID=9606;
RN   [1]
RP   SEQUENCE FROM N.A.
RA   Pluvinet R., Estivill X., Escarceller M., Sumoy L.;
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
RN   [2]
RP   SEQUENCE FROM N.A.
RA   Auffray C., Ansorge W., Ballabio A., Estivill X., Gibson K.,
RA   Lehrach H., Poustka A., Lundeberg J.;
RT   "The European IMAGE consortium for integrated Molecular analysis of
RT   human gene transcripts.";
RL   Submitted (JUL-2000) to the EMBL/GenBank/DDBJ databases.
RN   [3]
RP   SEQUENCE FROM N.A.
RC   TISSUE=Brain;
RA   Duesterhoeft A., Lauber J., Mewes H.W., Gassenhuber J., Wiemann S.;
RL   Submitted (JAN-2000) to the EMBL/GenBank/DDBJ databases.
RN   [4]
RP   SEQUENCE FROM N.A.
RC   TISSUE=B-cell;
RA   Strausberg R.;
RL   Submitted (AUG-2001) to the EMBL/GenBank/DDBJ databases.
DR   EMBL; AL390090; CAB98212.1; -.
DR   EMBL; AL136622; CAB66557.1; -.
DR   EMBL; BC012341; AAH12341.1; -.
DR   InterPro; IPR003397; Tim17_Tim22.
DR   Pfam; PF02466; Tim17; 1.
KW   Hypothetical protein.
SQ   SEQUENCE   285 AA;  32177 MW;  5AA6474C3ABCCFA2 CRC64;

  Query Match             99.5%;  Score 1485;  DB 4;  Length 285;
  Best Local Similarity   99.3%;  Pred. No. 3.2e-125;
  Matches  283;  Conservative    2;  Mismatches    0;  Indels    0;  Gaps    0;

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Sequence Comparison B

```
LOCUS       IRO713100               1352 bp    mRNA    linear   PRI 19-JUL-2000
DEFINITION  Homo sapiens mRNA full length insert cDNA clone EUROIMAGE 713100.
ACCESSION   AL390077
VERSION     AL390077.1  GI:9368517
KEYWORDS    FLI_CDNA.
SOURCE      Homo sapiens (human)
  ORGANISM  Homo sapiens
            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
            Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
REFERENCE   1
  AUTHORS   Auffray,C., Ansorge,W., Ballabio,A., Estivill,X., Gibson,K.,
            Lehrach,H., Poustka,A. and Lundeberg,J.
  TITLE     The European IMAGE consortium for integrated Molecular analysis of
            human gene transcripts
  JOURNAL   Unpublished
REFERENCE   2  (bases 1 to 1352)
  AUTHORS   Pluvinet,R., Estivill,X., Escarceller,M. and Sumoy,L.
  TITLE     Direct Submission
  JOURNAL   Submitted (18-JUL-2000) Dept. Genetica Molecular, Institut de
            Recerca Oncologica (IRO), Hospital Duran i Reynals, Av. Gran Via
            s/n Km 2,7 L'Hospitalet de Llobregat, 08907 Barcelona, Catalunya,
            SPAIN. Tel: ++34-93-260-7775 Fax: ++34-93-260-7776 WWW site:
            http://www.iro.es e-mail enquiries: lsumoy@iro.es
COMMENT     EURO-IMAGE Consortium Contact: Auffray C
            CNRS UPR 420 - Genetique Moleculaire et Biologie du Developement
            IFR 1221 - Rue Guy Moquet 19, Batiment G - BP 8
            94801 Villejuif  Cedex, FRANCE
            Tel: ++33-1-49 58 34 98
            Fax: ++33-1-49 58 35 09
            e-mail: auffray@infobiogen.fr
            This clone is available royalty-free through IMAGE Consortium
            Distributors.
            IMPORTANT: This sequence represents the full insert of this IMAGE
            cDNA clone. No attempt has been made to verify whether this
            corresponds to the full-length of the original mRNA from which it
            was derived.
FEATURES             Location/Qualifiers
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                     /organism="Homo sapiens"
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                     /db_xref="RZPD:IMAGp998F131747"
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ORIGIN

  Query Match             98.0%;  Score 1323.4;  DB 9;  Length 1352;
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  Matches 1327;  Conservative    0;  Mismatches    6;  Indels    0;  Gaps    0;
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